

**SECTION A**

Note : Answer **all** questions. Each answer may be limited to 5 lines.

**10 x 2 = 20**

1. Which is the largest Botanical garden in the world? Name a few well known botanical gardens in India.
2. Name two diseases caused by Mycoplasmas.
3. Who is popularly known as father of Botany? What was the book written by him?
4. What is meant by pulvinous leaf base? In members of which angiospermic family do you find them?
5. Differentiate actinomorphic from zygomorphic flower.
6. What is geocarpy? Name the plant which exhibits this phenomenon.
7. What is middle lamella made of? What is its functional significance?
8. Give one example for each of amino acids, sugars, nucleotides and fatty acids.
9. Given that the average duplication time of *E. coli* is 20 minutes. How much time will two *E.coli* cells take to become 32 cells?
10. Name the type of land plants that can tolerate the salinities of the sea.

**SECTION B**

Note: Answer **any six** questions. Each answer may be limited to 20 lines

**6 x 4 = 16**

11. Give the salient features and importance of Chrysophytes.
12. What is heterospory? Briefly comment on its significance. Give two examples.
13. Identify each part in a flowering plant and write whether it is haploid (n) or diploid (2n).  
(a) Ovary \_\_\_\_\_ (b) Anther \_\_\_\_\_ (c) Egg \_\_\_\_\_ (d) Pollen \_\_\_\_\_  
(e) Male gamete \_\_\_\_\_ (f) Zygote \_\_\_\_\_ (g) Antipodal \_\_\_\_\_ (h) Megaspore mother cell \_\_\_\_\_
14. Describe the non-essential floral parts of plants belonging to Fabaceae.
15. Describe the structure of nucleus.
16. What are the characteristics of a prokaryotic cell?
17. What is periderm? How does periderm formation take place in the dicot stems?
18. What are hydrophytes? Briefly discuss the different kinds of hydrophytes with examples.

**SECTION C**

Note: Answer **any two** questions. Each answer may be limited to 60 lines

**2 x 8 = 16**

19. Explain how stem is modified variously to perform different functions.
20. With a neat labeled diagram describe the parts of a mature angiosperm embryo sac. Mention the role of synergids.
21. Describe the T.S of a dicot stem.